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## Department of Energy

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Mr Steve Gunderson  
Colorado Department of Public Health and Environment  
4300 Cherry Creek Drive South  
Denver, Colorado 80246-1530

Mr Tim Rehder  
U S Environmental Protection Agency  
Region VIII  
999 18<sup>th</sup> Street, Suite 500  
Denver, Colorado 80202-2466

Dear Mr Gunderson and Mr Rehder

Enclosed for your information is the Rocky Flats Cleanup Agreement (RFCA)

Implementation Quarterly Status Report for the fourth quarter fiscal year 1998 Included  
in the report is an update to RFCA Attachment 12

If you have any questions about this report, please contact me at (303) 966-7252


  
R. R. Sarter  
RFCA Project Coordinator

Enclosure

cc w/Enc  
Administrative Record

cc w/o Enc  
J Legare, AMEC, RFFO  
S Bell, OCC, RFFO  
D Shelton, K-H  
L Brooks, K-H

Reviewed for Addressee  
Corres Control RFP

10/29/98   
Date By

Ref Ltr #

DOE ORDER # 



ADMINISTRATIVE  
9W-A-002771

**QUARTERLY STATUS REPORT**  
**RFCA IMPLEMENTATION**  
**ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE**  
**FOURTH QUARTER FISCAL YEAR 1998**

**1.0 Introduction**

Pursuant to paragraph 263 of the Rocky Flats Cleanup Agreement (RFCA or Agreement), this quarterly status report presents the progress toward implementation of activities covered under the Agreement. The RFCA is a legally binding agreement between the Department of Energy (DOE), the Environmental Protection Agency (EPA), and the Colorado Department of Public Health and Environment (CDPHE) to accomplish required cleanup of radionuclide and hazardous substance contamination at and from the Rocky Flats Environmental Technology Site (RFETS or Site).

This report describes activities that occurred from July 1998 through September 1998 (referred to as the fourth quarter of fiscal year [FY] 98) and future planned activities. The sections of this report are organized into the following topics: (1) Introduction, (2) Site-wide Activities, (3) Implementation of the RFCA, (4) Water Management, (5) RFCA Milestones and Target Activities, (6) Site Closure Project, and (7) List of Approved Decision Documents.

**2.0 Site-wide Activities**

During the fourth quarter of FY98, several site-wide activities continued. These activities include (1) Accelerating Cleanup: Path to Closure, and (2) Actinide Migration Studies.

**2.1 Accelerating Cleanup: Path to Closure**

This document provides, for the first time, a project-by-project forecast of the technical scope, cost, and schedule required to complete all 353 projects at DOE's 53 remaining cleanup sites in the United States. The *Path to Closure* document is part of a continuum from the first life-cycle cost estimates and risk analyses underlying the Baseline Environmental Management Report (BEMR), reflecting DOE's strengthened and more organized commitment to listen and respond to stakeholder, regulator, Tribal Nation, and internal DOE concerns. The result is a more realistic projection of where DOE is headed, how DOE can accelerate cleanup and closure, and what the barriers are to further acceleration of those goals. At present, the Rocky Flats document shows a 2010 completion date at a cost of approximately \$7.3 billion.

A limited update of FY98 costs, milestones and metrics will be completed in the first quarter of FY99 with a full update to the document scheduled for completion in the third quarter of FY99.

**2.2 Actinide Migration Studies**

During the fourth quarter of FY98, the following Actinide Migration Studies activities were accomplished: (1) continued calibration of the Watershed Erosion Modeling on the South Interceptor Ditch, (2) completed size fractionation and plutonium/americium analyses of soil.

samples and summarized results in a draft report, (3) organized and held a meeting with the Actinide Migration Studies Group and Stakeholders on August 17 and 18, 1998, to discuss Actinide Migration FY98 work progress, the soil fractionation results, and the mass loading analysis, (4) collected surface water samples from GS03 for analysis of total suspended solids fractions, (5) held discussions on and revised the draft Conceptual Model report, (6) completed actinide mass loading analysis, and (7) audited Colorado School of Mines laboratory. A meeting with the Actinide Migration Studies Group and Stakeholders on FY98 results and path forward is planned for October 21, 1998.

### **3.0 Implementation of the RFCA**

Activities associated with the implementation of RFCA during the fourth quarter of FY98 include (1) continued negotiations on the National Pollutant Discharge Elimination System permit, (2) the Integrated Monitoring Plan, (3) the Closure Project Baseline, (4) RFCA Annual and Biennial Assessments, and (5) completion of the 1998 annual updates of the Environmental Restoration Ranking (RFCA Attachment 4) and the Historical Release Report. These RFCA implementation activities are discussed below.

#### **3.1 National Pollutant Discharge Elimination System (NPDES) Permit**

As of the end of the fourth quarter of FY98, the new NPDES permit remains unissued. The permit is on hold pending resolution of issues involving the McKay Ditch.

#### **3.2 Integrated Monitoring Plan (IMP)**

The IMP Working Group reviewed the FY98-99 Integrated Monitoring Plan from May 21 through July 31, 1998. Subsequently, the DOE Rocky Flats Field Office (RFFO) reviewed the IMP and the IMP Background Document. All comments were resolved and incorporated, as appropriate, into the documents with final distribution of the IMP and IMP Background Document occurring on October 8, 1998.

Previously, the IMP Working Group addressed the Citizen Advisory Board's (CAB) recommendation to collaborate with DOE to improve the manner "in which environmental monitoring information and data is presented to the community" by agreeing that another avenue for reaching the public could be the use of the State Data Exchange of Information meetings ("data exchange meetings") held once per quarter. In addition, the Site is in the initial stages of developing a data system called the Environmental Data Dynamic Information Exchange (EDDIE). EDDIE is currently being tested over the Site's Intranet system and should be released to the Site's Internet by the end of the first quarter of FY99. Comments for any improvement of EDDIE will be welcome.

Because of the increased number of Environmental Restoration (ER) and Decontamination & Decommissioning (D&D) projects being proposed for FY99 and the out years, the Special Projects Subgroup of the IMP Working Group will be working with renewed emphasis on establishing project-specific monitoring requirements for these projects. The goal for FY99 is to get involved in the various projects early enough to offer advice on how to integrate the monitoring aspects supporting the projects.

### **3.3 Closure Project Baseline (CPB)**

An external validation is scheduled to begin in the first quarter of FY99 with expected completion in the second quarter of FY99. Subsequent to the external validation, the major changes will be incorporated into the CPB and the next update to the *Paths to Closure* document. DOE and Kaiser-Hill will continue to refine the schedules and basis of estimates, examine assumptions, and evaluate alternative closure project strategies that will result in an improved CPB.

### **3.4 RFCA Annual Review and Biennial Assessment**

Pursuant to RFCA paragraph 5, the RFCA Parties conducted an annual review of all applicable new and revised statutes, regulations, written policy, and guidance to determine if an amendment pursuant to Part 19 (Amendment of Agreement) was necessary. In addition, the RFCA Parties also reviewed any new scientific information, which was relevant to the question of, whether the radiological soil action levels are protective. The RFCA Project Coordinators concluded that the 1998 RFCA review, including the review of RSALs, did not warrant any changes or updates to RFCA. The RFCA Project Coordinators issued an annual review report to the Stakeholders on September 15, 1998. This report is available in the Rocky Flats Public Reading Rooms.

Pursuant to RFCA paragraph 257, the RFCA Parties conducted a biennial assessment of the substantive and procedural requirements of the Agreement to determine what measures each Party will take to ensure effective implementation of the Agreement. The biennial assessment was completed by July 20, 1998. A final report summarizing the RFCA biennial assessment and a responsiveness summary will be prepared and will be available in the Rocky Flats Public Reading Rooms.

### **3.5 Annual Update to the ER Ranking and Historical Release Report**

The 1998 annual updates to the ER Ranking and the Historical Release Report were completed on September 30, 1998. Copies of the updates will be available in the Rocky Flats Public Reading rooms during the first quarter of fiscal year 1999. Highlights from each report included

#### **Historical Release Report**

Provides information pertaining to spills, releases, or findings of contaminants at RFETS. Large portion of the text addresses new information gathered to update older IHSSs or PACs descriptions. In the Introduction, the background section has been rewritten to capture the history of the 16 original OUs designated in the IAGs into 7 OUs in RFCA. A new status table updates the number of source removal actions performed, the number of IHSSs and PACs officially closed out either by written direction from the agencies or through the CAD/ROD process, the number of IHSSs and PACs proposed for NFA since 1992 HRR, and number of total CERCLA sites warranting further research and/or investigation. This is located at the end of Section 1.0 Table 1, located at end of HRR document, and provides a list of all CERCLA sites identified in the original HRR.

#### **ER Ranking:**

The list is used as a tool in planning and prioritizing removal action at RFETS. The list was updated to reflect the following: Trench T-1 source removal at IHSS 108 was completed. Building 123 site (IHSSs 148, 121, UBC, RCRA Unit 40) were added to ER Ranking.

Mound Site Plume remedial action was completed. Additional information was made available to modify the ranking of the following sites: PU&D Yard, PU&D Yard plume, East Trenches plume, IHSS 118 1, 903 Pad and Lip Area (IHSSs 112 and 115), Bowman's Pond (PAC 700-1108), Trench 7 (IHSS 111 4), and Building 440 area. The status column is consistent with the 1998 Annual HRR Update with respect to proposed NFAs. The low ranked portions of the prioritized list have been combined.

#### **4 0 WATER MANAGEMENT**

Water management activities during the fourth quarter of FY98 include (1) watershed improvements, (2) surface water management, (3) surface water monitoring, (4) ground water monitoring, and (5) the Rocky Flats Water Working Group.

##### **4 1 Watershed Improvements**

No watershed improvements were implemented during the fourth quarter of FY98. Discussions with the regulators on Site improvements will be initiated in first quarter FY99.

##### **4.2 Surface Water Management**

During the fourth quarter of FY98, the Site completed the following pond water transfers and discharges totaling 42.37 million gallons (MG), a decrease of 28.69 MG (40%) compared to the fourth quarter of FY97.

There was no Pond A-1, Pond A-2, Pond B-1, Pond B-2, Pond C-2, or Landfill Pond activity during the fourth quarter of FY98.

Pond A-3 activity included one routine outlet valve direct discharge to Pond A-4 totaling 3.68 MG. This discharge occurred during the period of August 3 through 7, 1998.

Pond A-4 activity included one routine outlet valve direct discharge to North Walnut Creek totaling 15.91 MG. This discharge occurred during the period of August 26 through September 8, 1998. The City of Broomfield diverted the Pond A-4 discharge around Great Western Reservoir via the Broomfield Diversion Ditch.

Pond B-5 activity included three routine pumped-transfers to Pond A-4 totaling 22.78 MG. The first transfer of 6.85 MG occurred during the period of July 6 through 12, 1998. The second transfer of 8.43 MG occurred during the period of August 3 through 9, 1998. The third transfer of 7.50 MG occurred during the period of September 14 through 20, 1998.

Transfers and discharges from the Site ponds during the fourth quarter of FY98 are summarized in Table 1.

**Table 1. Site Pond Water Transfers and Discharges – Fourth Quarter FY98**

<b>Dates</b>	<b>Pond Activity</b>	<b>Total MG</b>	<b>Mode</b>
8/3 to 8/7	A-3 to A-4	3.68	Outlet valve direct discharge
8/26 to 9/8	A-4 to NWC	15.91	Outlet valve direct discharge
7/6 to 7/12	B-5 to A-4	6.85	Pumped-transfer
8/3 to 8/9	B-5 to A-4	8.43	Pumped-transfer
9/14 to 9/20	B-5 to A-4	7.50	Pumped-transfer
	<b>Total for Quarter</b>	<b>42.37 MG</b>	

#### **4.3 Surface Water Monitoring**

During the fourth quarter of FY98, 44 automated monitoring system samples were collected and submitted for analysis. All 30-day moving average results for samples collected from RFCA Point of Compliance (POC) monitoring locations were well below the RFCA standards. However, Point of Evaluation (POE) monitoring location GS10 (located on upper S. Walnut Creek above the B-1 Bypass) showed 30-day moving average results above the RFCA Action Level and Standards Framework (ALF) action levels of 0.15 pCi/L for americium (Am). The calculated 30-day running averages for Am exceeded the 0.15 pCi/L action level from July 23 through August 14, 1998. Results from samples collected after August 14, 1998, have not been returned from the lab. As of August 14, 1998, the 30-day average remained above 0.15 pCi/L. Additionally, POE monitoring location SW027 (located on the South Interceptor Ditch above Pond C-2) showed 30-day moving average results above the RFCA action levels of 0.15 pCi/L for plutonium (Pu). The calculated 30-day running averages for Pu exceeded the 0.15 pCi/L action level from May 5 through August 6, 1998.

The Walnut Creek Source Evaluation continued during the fourth quarter of FY98. Analytical results pertaining to the investigation for GS03, GS10, and SW093 continue to be received and evaluated.

Additionally, a Source Evaluation for RFCA POE SW027 has been initiated in response to the reportable values detailed above. The Source Evaluation Report for SW027 will be delivered to the Stakeholders on October 29, 1998.

Freeze protection upgrades have been completed at RFCA POC GS11 monitoring station located at the outlet of Pond A-4. Upgrades at POCs GS01, GS03, GS08, and GS31 will be completed in the first quarter of FY99.

#### **4.4 Ground Water Monitoring**

The 1998 First Quarter RFCA Ground Water Monitoring Report included analyses on all but a few samples that were not received in time for evaluation. Public presentation of the first quarter data was done at the State Data Exchange of Information meeting on August 25, 1998. Groundwater field characterization of the Building 123 decommissioning project was completed in August, 1998. A Groundwater Working Group meeting was held on September 3, 1998, to discuss groundwater evaluation issues. Groundwater sampling and water level measurements for the semiannual period ending September 30, 1998 were completed on September 10, 1998.

Groundwater field evaluation of the north part of the Industrial Area plume was completed in September, 1998. The RFCA Annual Groundwater Report was completed and delivered to DOE, RFFO on September 30, 1998.

#### **4.5 Rocky Flats Water Working Group**

During the fourth quarter of FY98, the Rocky Flats Water Working Group met on almost a bi-weekly schedule. Two technical sub-groups were formed, one evaluating direct discharge from Pond B-5 (Technical Team #1), and the other at the Solar Ponds/Interceptor Trench System area (Technical Team #2). Technical Team #1 is finalizing the evaluation of the benefits, impacts and risks of B-5 discharge and its costs. This evaluation will be summarized in a draft report planned for completion in October, 1998. Technical Team #2 is providing background information and developing its scope. The Rocky Flats Water Working Group meets monthly, the next meeting is set for November 10, 1998. Discussion topics include (1) the memorandum of understanding with the United States Fish and Wildlife Service (USFWS) and the Habitat Conservation Plan, (2) the role of the Colorado Division of Wildlife at RFETS.

#### **5.0 Status of RFCA Milestones and Target Activities (M&TAs)**

EPA and CDPHE established the FY98 M&TAs during the first quarter of FY98. A description and status of the FY98 M&TAs, including the fourth quarter accomplishments, are listed below. Attachment 1 is a table summarizing the status of each project.

##### **5.1 Either a) construct new facility for storage of TRU/TRM Waste by 9/30/98 or b) by 9/30/98 demonstrate adequate storage available for TRU/TRM [FY98 Milestone M1]**

This milestone is complete. In September, 1998, a report titled "Transuranic and Transuranic Mixed (TRU/TRM) Waste Inventory Management Strategy" was finalized to satisfy completion of this milestone. The report was generated to document the results of an ongoing evaluation of the need for additional storage. The conclusion of this version of the report indicates that storage capacity was adequate for FY98.

##### **5.2 Complete construction of a new TRU/TRM repackaging facility by 9/30/98 [FY98 Milestone M2]**

This milestone is complete. Kaiser-Hill completed construction, all required systems operation tests and approved a "Beneficial Occupancy Notification" for the TRU/TRM Repack Facility by September 23, 1998. Major facility components include: containment cell, HEPA filtration system, glovebox, structural upgrades, and building utility upgrades.

##### **5.3 Complete removal of 40 gloveboxes from Building 779 by 9/30/98 [FY98 Milestone M3]**

This milestone is complete. Strip out of contaminated gloveboxes was initiated in early April, 1998, following Kaiser-Hill approval (and required DOE notification) of the corrective actions taken on the findings from the March, 1998, Management Review of readiness to remove contaminated gloveboxes. Completion of the removal of the 40 gloveboxes was achieved on

August 6, 1998

- 5.4     Either a) ship cumulative amount of 48% of 10/1/96 pondcrete/saltcrete inventory off-site and evacuate all wastes from Tents 2, 8, and 12 by 9/30/98 or b) make the decision to construct additional on-site storage for pondcrete/saltcrete by 12/31/97 [FY98 Milestone M4]**

This milestone is complete. As of September 30, 1998, the shipping component of 4,050 m<sup>3</sup> has been exceeded with 6,526 m<sup>3</sup> of saltcrete/pondcrete having been shipped off-site. Tents 2, 8, and 12 are empty.

- 5.5     Ship 375 drums of TRU/TRM to WIPP by 9/30/98, assuming a May 1, 1998 opening [FY98 Milestone M5]**

The regulatory agencies agreed to eliminate this FY98 milestone on August 11, 1998. WIPP was scheduled to open in May, 1998. This did not occur, however, EPA issued their final certification rule on May 18, 1998. Lawsuits have been filed against EPA challenging the certification and these are pending. Also, the State of New Mexico is so far not agreeable to allow disposal at WIPP until the Part B permit is issued. This is not expected to occur until mid-1999 at the earliest.

- 5.6     Meet or exceed the previous years off-site shipment of Low Level (LL) waste (FY97 shipped amount = 1,287 m<sup>3</sup>) [FY98 Milestone M6]**

This milestone is complete. As of September 30, 1998, 2,627 m<sup>3</sup> of LL waste was shipped off-site.

- 5.7     Complete Trench T-1 accelerated cleanup by 9/30/98 [FY98 Milestone M7]**

This milestone is complete. The excavation of T-1 was initiated on June 10, 1998, and completed on August 20, 1998. The FY 1998 scope of work was conducted in accordance with the minor modification to the Proposed Action Memorandum (PAM) for the Source Removal at Trench 1, Individual Hazardous Substance Site (IHSS) 108. The FY98 scope of work for the project included the excavation of T-1, the gross segregation of excavated waste materials by waste type, and the appropriate packaging and storage of associated waste materials. As a result of unanticipated levels of volatile organic compounds (VOCs) and polychlorinated biphenyls (PCBs) in the depleted uranium waste removed from the trench, the treatment and off-site shipment of this waste is anticipated in fiscal year 1999.

- 5.8     Complete work described in PAM for Building 123 and 123S by 9/1/98 [FY98 Milestone M8]**

This milestone is complete. The Building 123 Decommissioning Project completed demolition of the facility on May 18, 1998, and removed all demolition debris on May 19, 1998. During the fourth quarter of FY98, the associated under-building contamination and IHSSs 148 and 121 were characterized and evaluated for inclusion on the 1998 ER Ranking annual update.



**5.9 Develop, finalize, and begin implementation of a site-wide natural resource management policy by 9/30/98**  
[FY98 Milestone M9]

This milestone is complete. RFFO finalized a Natural Resource Management Policy (NRMP) on September 25, 1998. Activities to begin implementing this policy have included (1) internal scoping of vegetation management issues, (2) numerous vegetation public involvement strategy sessions with the CAB and Rocky Flats Local Impacts Initiative, and (3) ongoing discussions with the USFWS to develop the "Memorandum of Agreement for Coordination of Endangered Species Compliance with Cleanup and Closure Activities at Rocky Flats Environmental Technology Site."

**5.10 Install and operate SPS in B707 by 9/30/98**  
[FY98 Target Activity T3]

Pursuant to RFCA Part 11, paragraph 163 and 164, DOE notified EPA and CDPHE that this target activity requires modification. The Defense Nuclear Facilities Safety Board, EPA and CDPHE are in agreement with identifying a new FY00 Target "Install and operate the plutonium packaging system in Building 371 by March 2000."

**5.11 Thermally stabilize 90% of the plutonium oxide generated during the year by 9/30/98**  
[FY98 Target Activity T5]

This target activity is complete, 90 percent of the plutonium oxide generated during the year was stabilized by September 30, 1998.

**5.12 Ship 35 SNM shipments off-site by 9/30/98**  
[FY98 Target Activity T7]

This target activity is complete, 35 Special Nuclear Material (SNM) shipments were sent off-site by September 30, 1998.

**5.13 Close three plutonium ES&H vulnerabilities by 9/30/98**  
[FY98 Target Activity T9]

This target activity is complete, three plutonium ES&H vulnerabilities were closed by September 30, 1998.

**6.0 Site Closure Project**

The site is continuing efforts to close Operable Units (OUs) that are not currently associated with a milestone. These projects, including the fourth quarter's accomplishments, are listed below.

**6.1 Environmental Restoration**

The OU consolidation under RFCA established the Buffer Zone (BZ) and Industrial Area (IA) OUs, and left OUs 1, 3, and 7 intact. Operable Units 5 and 6 remain in place with some minor modifications. The following actions were completed for each OU during fourth quarter of FY98:

### **6.1.1 OU 1**

Pursuant to the OU1 Corrective Action Decision/Record of Decision (CAD/ROD), a remedial action for IHSS 119 1 was initiated in April, 1997 using closure funds. As required by the CAD/ROD, an investigation was completed for potential downgradient sources. Another investigation was completed to acquire information for determining worker health and safety requirements. Based on the results, it was concluded by the lead regulatory agency and DOE to proceed with an amendment to the CAD/ROD calling for long-term monitoring with No Further Remedial Action. Alternatives to support this action are being evaluated, and the Amendment is expected to be completed in FY99.

### **6.1.2 OU 5**

In light of the fact that four areas within OU5 contain radionuclides in subsurface soils in excess of the RFCA Soil Action Level, DOE submitted a written proposal to the regulators to consolidate the OU5 IHSSs into the BZ OU and address them according to the ER Ranking. In addition, DOE requested written approval from the EPA on the RCRA Facility Investigation/Remedial Investigation (RFI/RI) Report. A response from EPA has not been received.

### **6.1.3 OU 6**

DOE staff has reviewed background information for OU6 in preparation for finalizing the RFI/RI Report and preparing the Proposed Plan. DOE expects to ask for final RFI/RI Report approval and to draft the OU6 proposed plan during FY99.

### **6.1.4 OU 7**

The passive seep collection system continues to operate with no changes since last quarter. The recommendation to stop treatment by carbon absorption and to install a simple cascade system for air stripping was approved by the agencies in the fourth quarter of FY98. A design for the cascade system was prepared. Implementation of the system change, as planned in the fourth quarter of FY98, was delayed until first quarter of FY99 because of necessary improvements in the design of the cascade system.

The OU 7 landfill will be addressed when it moves up in priority on the ER Ranking list.

### **6.1.5 Buffer Zone OU**

#### **6.1.5.1. Trench T-1 (IHSS 108, BZ OU)**

The completion of the Trench T-1 accelerated cleanup is RFCA milestone M7. For a status on the milestone, see Section 5.7.

#### **6.1.5.2 903 Pad and Lip Area (IHSSs 112/155, BZ OU)**

Characterization of the 903 Pad, Lip Area, and Am Zone continued in the fourth quarter of FY98. The subsurface sampling for radiological contaminants resumed and seven additional boreholes were installed and sampled, bringing the total of completed boreholes to 45 of 51. The remaining boreholes will be completed in FY99. The final sampling and analysis plan (SAP) for

the 903 Pad was issued. Measurement of radiological surface soils was initiated in the fourth quarter of FY98. Over 200 of the 1200 gamma spectroscopy measurements were completed. The remaining measurements will be completed in FY99.

### **6.1.5.3 Mound Plume**

Installation of the collection and treatment system for the Mound Plume was successfully completed ahead of the proposed RFCA milestone schedule of FY99. The system is fully operational and the collection system at Seep SW059 has been removed. System performance is being monitored in conjunction with the EPA Site Innovative Technology Evaluation (SITE) Program. Monitoring will be performed as part of the IMP following EPA SITE monitoring.

### **6.1.5.2 East Trenches and 903 Pad/Ryan's Pit Plumes**

Analyses, validation, and evaluation of the characterization samples for the East Trenches and 903 Pad/Ryan's Pit Plumes were completed by the Kaiser-Hill Team in the fourth quarter of FY98. Results were reviewed with the agencies. Agreement was reached to implement monitoring and natural attenuation as the remedy for the 903 Pad/Ryan's Pit Plume. This agreement will be documented in a Technical Memorandum that is expected to be issued in the first quarter of FY99. Preparation of a decision document for the East Trenches Plume was initiated during the fourth quarter of FY98. Conceptual design of a reactive barrier for the East Trenches Plume was prepared by IT Corporation for Rocky Mountain Remediation Services, L L C (RMRS) and provided to the regulators for review.

### **6.1.5.3 Solar Ponds Plume**

Inductively coupled plasma/mass spectroscopy analyses of the uranium samples submitted to the Los Alamos National Laboratory in the third quarter of FY98 were received and evaluated by the Kaiser-Hill Team. Results strongly indicate that the uranium in the distal end of the plume is from a natural source and is not man made. Modeling results for both nitrate and uranium were received and reviewed by RMRS. The conceptual design for the phytoremediation system was completed. Remedial alternatives were reevaluated based on new information regarding the uranium analyses, the modeling results, the effectiveness of the phytoremediation system, and the expanded habitat of the threatened Prebles Meadow Jumping Mouse. Modeling results, additional data received, and reevaluation of alternatives were presented to the agencies on August 19, 1998 and September 29, 1998. Treatability studies to support a reactive barrier for remediation of the Solar Ponds Plume are expected to be initiated early in the first quarter of FY99. A decision document is expected to be completed in the first quarter of FY99.

### **6.1.5.4 Modular Storage Tanks (MST) Repairs and Corrective Actions**

The assessment of alternatives to stabilize the hillside below the MSTs was completed. The conceptual design selected consisted of stabilization of the hillside with rock fill. The east tank was emptied to reduce the weight above the unstable hillside. Funding was requested by Kaiser-Hill and received from DOE to implement design and construction of the selected alternative and freeze protection of the new overland influent and effluent pipelines between pump stations in the first quarter of FY99. Stabilization efforts are being coordinated with remediation of the Solar Ponds Plume to implement cost savings where possible.

## **6 1.6 Industrial Area OU**

Kaiser-Hill prepared the Draft SAP for Monitoring of Natural Attenuation at IHSS 118 DOE submitted the SAP to the agencies for review The final SAP will be issued in the first quarter of FY99 Installation of the new monitoring wells for IHSS 118 1 is expected to be completed in the first quarter of FY99 The strategy for characterization and remediation of the industrial area will be developed in FY99

## **6 2. D&D Cluster Closure Projects**

### **6.2.1 Decommissioning Program Plan (DPP)**

Meetings held with CDPHE and EPA resulted in progress being made in reaching agreements on document intent and content The draft DPP was completed in February, 1998, and released for a 60-day public comment period from April 15 through June 15, 1998 The RFCA Parties are dispositioning comments that were received While all Parties recognize the desirability of the DPP, no final date for completion has yet been established

### **6 2.2 Building Radiation Closure Standards**

The Working Group (DOE, CDPHE, EPA, and Kaiser-Hill Team), formed to recommend building radiation closure standards, remains on hold pending evaluation of Nuclear Regulatory Commission (NRC) decommissioning regulations The NRC has issued separate decommissioning regulations that could impact RFETS The RFCA Parties are reviewing the NRC standards for potential applicability to RFETS The Stakeholders are involved with this review

### **6.2. Building (B) 779 Cluster Closure Project**

The Decommissioning Operations Plan (DOP) for the B779 Cluster Project was approved by CDPHE on February 6, 1998 Approval was granted to initiate and pursue decommissioning activities within the B779 cluster in accordance with plans and commitments as described within the DOP Accordingly, decommissioning activities remain underway, with the removal of 61 gloveboxes completed by September 30, 1998

### **6 2.4 B886 Cluster Closure Project**

CDPHE approved the Interim Measure/Interim Remedial Action (IM/IRA) for the B886 Cluster Closure on August 3, 1998 Decommissioning activities were subsequently initiated and completed in preparation for the demolition of the B886 Cluster In Room 101 decommissioning activities completed include the removal of four tanks and vertical split table from the assembly hood, one horizontal split table, and miscellaneous loose tools and containers by September 30, 1998 The removal of the annular tank in Room 101 is also required during decommissioning and will be completed during the first quarter of FY99 In Room 103 decommissioning activities completed include the removal of two pumps, ancillary piping, nine tanks and two filters from the downdraft table and HEPA assembly by September 30, 1998 Funding has been requested via the budget process to continue with other decommissioning activities in FY99

### **6.2.5 B771 Cluster Closure Project**

The B771 Closure Project scope includes the deactivation, D&D, and demolition of B771/774, ancillary support structures, trailers, plant systems and utilities, underground tank systems, and waste sites associated with the B771 complex

An integrated approach towards closure is being implemented that is expected to accelerate closure of this complex significantly. The B771 closure project is being developed to integrate the final mission or risk-reduction work, SNM holdup removal, deactivation, and decommissioning.

Risk-reduction efforts are currently in process -- all liquid tanks have been drained and all residues have been removed from the building. One unused glovebox line and tank farm has been removed. Tapping and draining of liquid process piping is in progress; two systems have been drained and removed. Removal of unnecessary Benelex shielding continues; 2,000 square feet have been removed. The Reconnaissance Level Characterization Report (RLCR) was submitted to CDPHE in September, 1998. On September 14, 1998, the DOP was released for a 45-day public comment period, which ends on October 28, 1998. Additional briefings for stakeholders have been conducted to introduce them to the B771 Closure project and the DOP.

### **6.2.6 B776/777 Cluster Closure Project**

The B776/777 Cluster Closure Project supports the DOE Strategic Plan by providing dismantlement by FY2006 and closure by FY2007. Current functions include support for SNM activities, e.g., storage, transfer and consolidation, residue sampling and repacks. Another function is to consolidate, reduce, sample, characterize, assay, and store waste and residue.

Since FY97, three RCRA storage units have been emptied, five mixed residue pencil tanks closed, 4,000 chemicals excessed, seven RCRA tanks emptied; all tanks sampled and purged, as necessary, of hydrogen, SNM removed from three vaults, forty five gloveboxes have been scanned for SNM holdup, two of thirteen identified areas have had SNM holdup removed, a RLCR has been developed, and a DOP has been submitted to DOE.

## **7.0 List of Approved Decision Documents**

CDPHE approved the B886 Cluster Closure Project IM/IRA on August 3, 1998.

No other decision documents were approved during the fourth quarter of FY98.

### Attachment 1: Summary of RFCA Activities

Driver	Commitment	Official Due Date	At Risk? (Y/N)	Status/ Comments	Actual Compl.
R/MILE STONE	FY98-M1 Either A) construct new facility for storage of TRU/TRM by 9/30/98, or B) by 9/30/98 demonstrate adequate storage available for TRU/TRM	9/30/98	N	Complete	9/10/98
R/MILE STONE	FY98-M2 Complete construction of a new TRU/TRM repackaging facility by 9/30/98	9/30/98	N	Complete	9/23/98
R/MILE STONE	FY98-M3 Complete removal of 40 gloveboxes from Building 779 by 9/30/98	9/30/98	N	Complete	8/6/98
R/MILE STONE	FY98-M4 Either A) ship cumulative 48% of 10/1/96 pondcrete/saltcrete inventory off-site & evacuate all wastes from Tents 2, 8, 12 by 9/30/98 and OR B) make the decision to construct additional on-site storage for pondcrete/saltcrete by 9/30/98	9/30/99	N	Complete	9/29/98
R/MILE STONE	FY98-M6 Meet or exceed the previous year's off-site shipment of LLW	9/30/98	N	Complete	6/5/98
R/MILE STONE	FY98-M7 Complete Trench T-1 accelerated cleanup by 9/30/98	9/30/98	N	Complete	8/20/98
R/MILE STONE	FY98-M8 Complete work described in PAM for Building 123 and 123S by 9/1/98	9/1/98	N	Complete	9/1/98
R/MILE STONE	FY98-M9 Develop, finalize, and begin implementation a site-wide natural resources management plan by 9/30/98	9/30/98	N	Complete	9/30/98
R/TARGET	FY98-T5 Thermally stabilize 90% of the plutonium oxide generated during the year	9/30/98	N	Complete	9/30/98
R/TARGET	FY98-T7 Ship 35 SNM shipments off-site by 9/30/98 (External uncertainties recognized)	9/30/98	N	Complete	9/30/98
R/TARGET	FY98-T9 Close three plutonium ES&H vulnerabilities by 9/30/98	9/30/98	N	Complete	9/30/98
CLOSURE PROJECT	OU1			Amendment to CAD/ROD specifying long-term monitoring w/NFRA expected in FY99	
CLOSURE PROJECT	OU5			Awaiting final RFI/RI report approval	
CLOSURE PROJECT	903 Pad and Lip Area			Subsurface sampling continued in 4 <sup>th</sup> qtr FY98 Measurement of rad surface soils was initiated in 4 <sup>th</sup> qtr FY98	
CLOSURE PROJECT	Mound Plume			Installation of collection/treatment system completed in 4 <sup>th</sup> qtr FY98	
CLOSURE PROJECT	East Trenches and 903 Pad/Ryan's Pit Plumes			Characterization completed in 4 <sup>th</sup> qtr FY98	
CLOSURE PROJECT	Solar Ponds Plume			Modeling results to date presented to regulators	
CLOSURE PROJECT	IHSS 118 1			Technical memorandum submitted to agencies in 3rd qtr FY98	
CLOSURE PROJECT	Building 779 Cluster Closure Project			On Schedule, DOP approved 2/6/98	
CLOSURE PROJECT	Building 886 Cluster Closure Project			On Schedule, DOP approved 8/3/98	
CLOSURE PROJECT	Building 771 Cluster Closure Project			DOP available for public 9/14/98 - 10/28/98	